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Case Report

# A rare case of cardiac metastasis from uterine cervical adenocarcinoma

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ABSTRACT

Metastatic cardiac tumors are rare and are usually from lung, breast, and esophageal cancers. Although uterine cervical cancer is relatively common, its metastasis to the heart is extremely rare. Herein, we report an unusual case of metastatic cervical adenocarcinoma to the heart presenting with a huge right atrial mass and tamponade. The cardiac mass was surgically resected and pathologic study with immunohistochemistry staining confirmed the diagnosis.

Learning objective**:** Metastatic cardiac tumors are rare. They usually originate from lung, breast, and esophageal cancers and mostly involve the pericardium and myocardium. The endocardium is rarely affected. Cervical cancer is one of the most common gynecologic cancers with a relatively favorable prognosis unless it metastasizes to distant organs. Metastases to the heart are rarely reported. The patient may be asymptomatic or present with hemodynamic instability due to tamponade state and/or a huge intracardiac mass.



## Introduction

Metastatic cardiac tumors are rare with a reported incidence of 1.2% based on autopsy studies [1]. The incidence may be underestimated, however, because these lesions are often clinically silent and found incidentally during clinical imaging for other purposes or may be unrecognized until an autopsy study is performed [2]. Theoretically, any malignant tumor is capable to metastasize to the heart; the most common ones include lung, breast, and esophageal cancers. Metastases from infradiaphragmatic organs are less frequent [3]. Herein, we report an unusual case of metastatic cervical cancer to the heart presenting with a huge right atrial mass and tamponade.

## Case report

The patient was a 60-year-old female, a known case of endometrial cancer of the uterine cervix who presented at our center with progressive dyspnea. Six months previously, after being evaluated for abnormal vaginal bleeding, she had been found to have a stage IIb-infiltrative cervical mass with extension to the proximal vagina and also to the adjacent parametrium revealed by abdominopelvic sonography and magnetic resonance imaging (MRI). Cervical biopsy with immunohistochemistry (IHC) study reported at another center had been strongly positive for P53 and P16 markers, and somewhat positive for CK7, CK20, and CDX2, compatible with the usual type of primary endocervical adenocarcinoma. She had undergone chemoradiation for several months but we were not informed about the details of the treatment regimen. A control MRI some weeks before presentation, had shown a slight shrinkage of the mass. Total hysterectomy had been planned but at the same time, she developed progressive dyspnea. By arrival at our center, the blood pressure was 95/60 mmHg and the heart rate was 125/min. On physical examination there were muffled heart sounds and jugular vein distension. A pulsus paradoxus of 25 mmHg was also noted. She experienced a rapid deterioration of clinical symptoms including massive ascites and at rest dyspnea. The patient was clinically at tamponade state. Transthoracic and transesophageal echocardiography revealed a huge mass almost completely occupying the right atrium with attachment to the intra-atrial septum and tricuspid valve (TV) leaflets (Fig. 1).

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